

IT1000-C / IT2000-C

1/4" BAND-IT[®] Pneumatic IT Tools



**Original document
(not a translation)**



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Safety Guidelines

This equipment has been tested by BAND-IT-IDEX and meets the requirement of stability during use, storage conditions, transportation, assembly, dismantling when out of service, testing or foreseeable breakdowns providing that the proper safety precautions are observed.

DANGER—Misuse of this equipment may result in serious injury to personnel.

- Only use the equipment for its intended purpose, as described in this manual
- Do not attempt to operate the equipment with covers removed
- Refer to the installation section before installing machine
- Do not operate machine with wet hands

Please read this entire manual before unpacking, setting up or operating this equipment. Pay attention to all danger and caution statements. Failure to do so could result in serious injury to the operator or other personnel, or damage to the equipment.

CAUTION

Caution – Equipment generates up to 87 db of audible noise when in use.
Hearing protection is advised for use of 8hr/day



Caution – Equipment generates up to 18.2 m/s² of vibration when in use.



Caution – Risk of pinch point
Located at tool head during cutoff cycle



Caution – Risk of electric shock
With cutoff signal tools only



Caution – Refer to accompanying documents



It is the task of the employer to warn his or her staff of risks, to train them on prevention of accidents, and to provide necessary safety equipment and devices for the operator's safety. Before starting to work with the machine, the operator should check the features of the machine and learn all details of the machine's operation. The machine should only be operated by staff members who have read and understand the contents of this manual.

Safety Guidelines

Environmental operating conditions are defined as:

- For Indoor Use ONLY
- Temperature range from 5°C to 38°C
- Max relative humidity 80% for temperatures up to 31°C. Allowable humidity then decreases linearly to 50% at 38°C
- Storage Temperature range from 5°C to 38°C
- Conforms to Applicable Rated POLLUTION DEGREE 1
- Correct illumination for safety of operator (ISO 8995-89)
- This tool has been tested for
Altitude: Sea level to 5690 ft (1730 m);
Atmospheric pressure: 14.7 lbs/in² (1 Kg/cm²) to 12 lbs/in² (0.85 Kg/cm²)
- Tool size: 8.5" x 7" x 6" (216 x 178 x 152 mm) ; Tool weight: 5 lbs (2.3kg)



Additional Safety Guidelines:

- Read this manual and become familiar with the tool before installing any clamps.
- Protective eyewear should be worn when connecting and disconnecting the tool to compressed air sources and during operation.
- Wear appropriate gloves for handling steel while operating this tool, applying steel clamps and removing scrap clamp tail.
- Clamp tensioning can be immediately stopped by releasing the tool trigger. If a remote trigger is used, the system must be connected to allow for immediate disabling of the tool.
- When applying clamps, care should be taken to insure fingers and loose clothing are not in the way of the clamp being applied.
- Never attempt to clamp objects which have a potential to burst, shatter or otherwise cause bodily harm.
- Disconnect air supply and electrical power prior to maintenance and disassembly of tool components.
- Liquids or lubricants should never be put into the air lines.

Tool Overview

This machine is designed to automatically install clamps with repeatability and control.

- The tool consists of a tension system and a cutting system, both pneumatically controlled.
- The pneumatic system can be adjusted to provide appropriate clamp force for different applications. As the tension pressure is increased, the output force of the tool increases.
- After a clamp tail is inserted into the tool the trigger is activated to begin tensioning.
- During the tension cycle, the tool continues to tension the band until the pre-set tension is achieved.
- After the tool has achieved the preset tension, a valve activates the lock forming and tail cutoff cycle.
- The gripping system retains force on the clamp until after the lock forming and tail cutoff actions are complete.

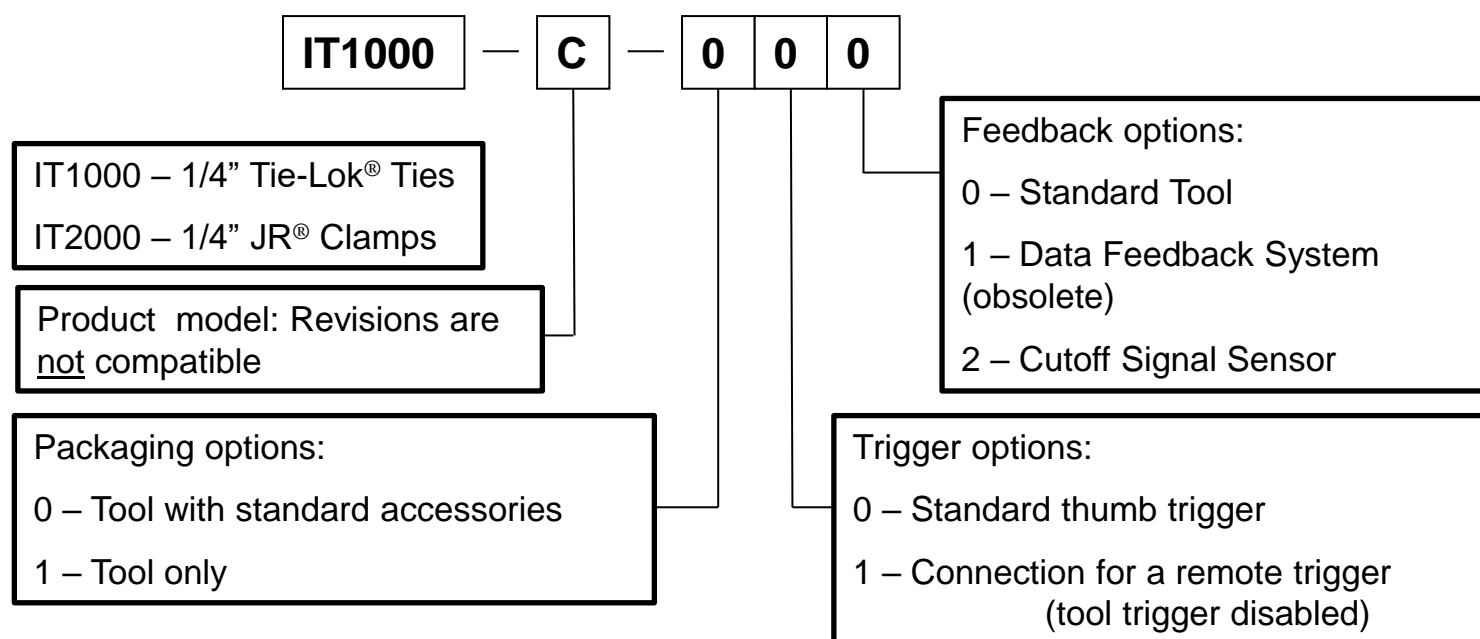
Benefits to using an IT tool on the TIE-LOK[®] or JR[®] S.I.D. clamp include:

- Capable of fast installation ~2-5 seconds in high volume production setting.
- Versatility to install clamps in various positions with one tool at the same work station.
- Ability to install clamps close to flanges and in difficult to access locations.
- Simple energy source (compressed air) and easy to use controls.

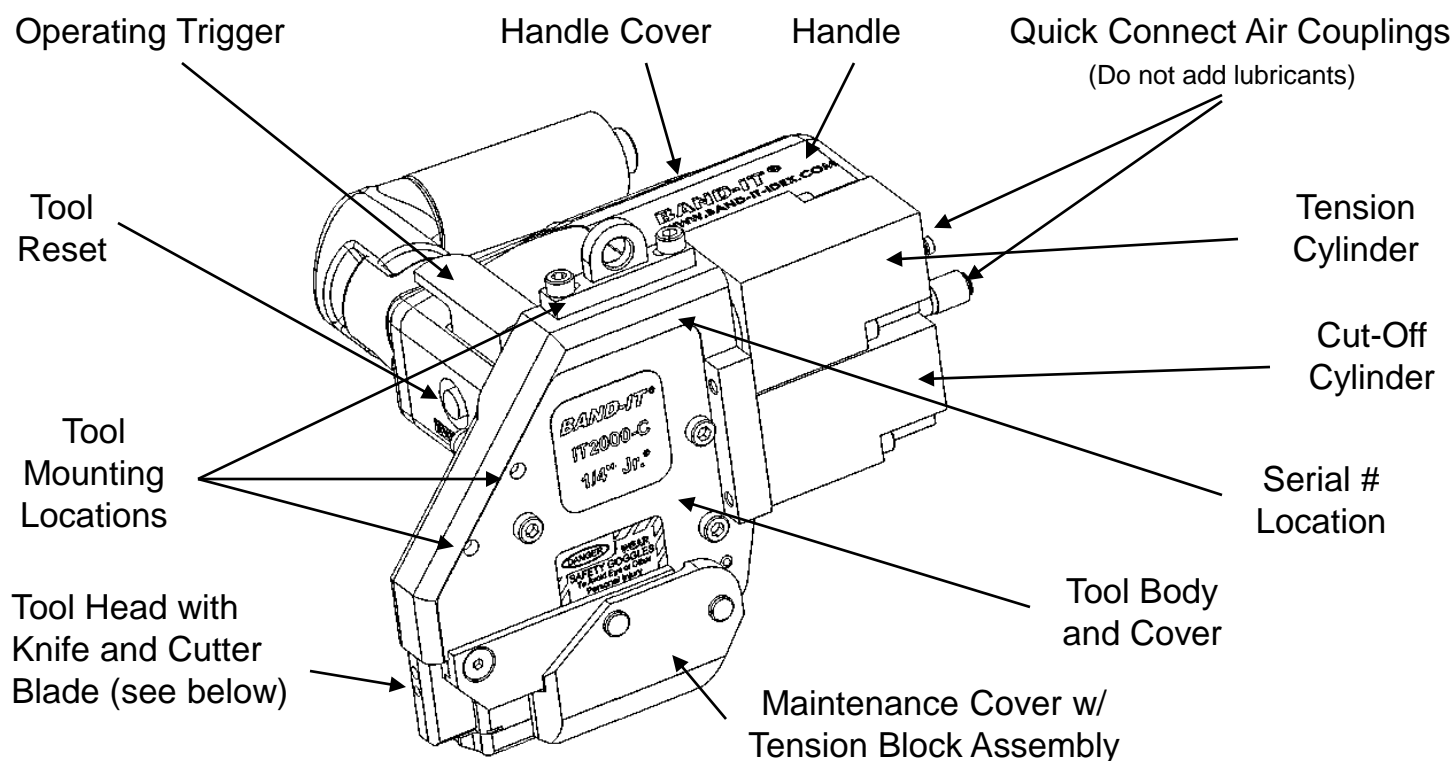
IT Tool Options

- Any IT tool can be ordered as a stand alone tool or with accessories. Accessories packages all include a pneumatic air flow regulator. Additional accessories vary depending on the tool options.
- The **remote trigger** option is a combination of a plumbing modification inside the tool, and a sold separately foot pedal package. (see pg.23 for additional information)
 - I17490 – Foot Pedal Control Kit, IT tools
 - I17450 – Manual, Foot Pedal Kit
- The **cutoff signal** functions by a pneumatic switch set to trigger every cutoff cycle providing an easy way to confirm and count clamps installed. The accessories option includes an 12ft extension cord for connecting to the sensor.
 - P48960 – Manual, Cutoff Signal
- The **data system** configuration is no longer available.
 - P48950 – Manual, Data Feedback System

Model Identification



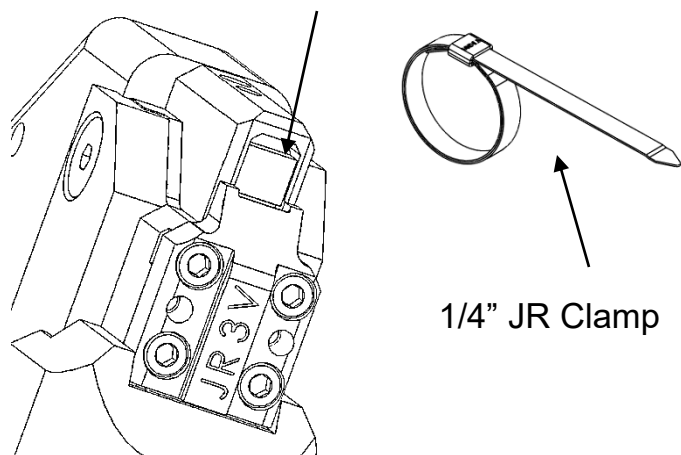
Tool / Component Identification



IT2000-C, 1/4" JR® Clamps

"JR" on Cutter Blade

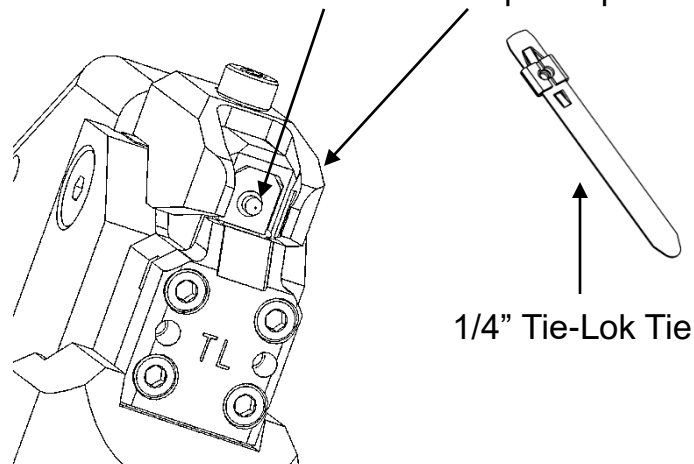
Knife without punch



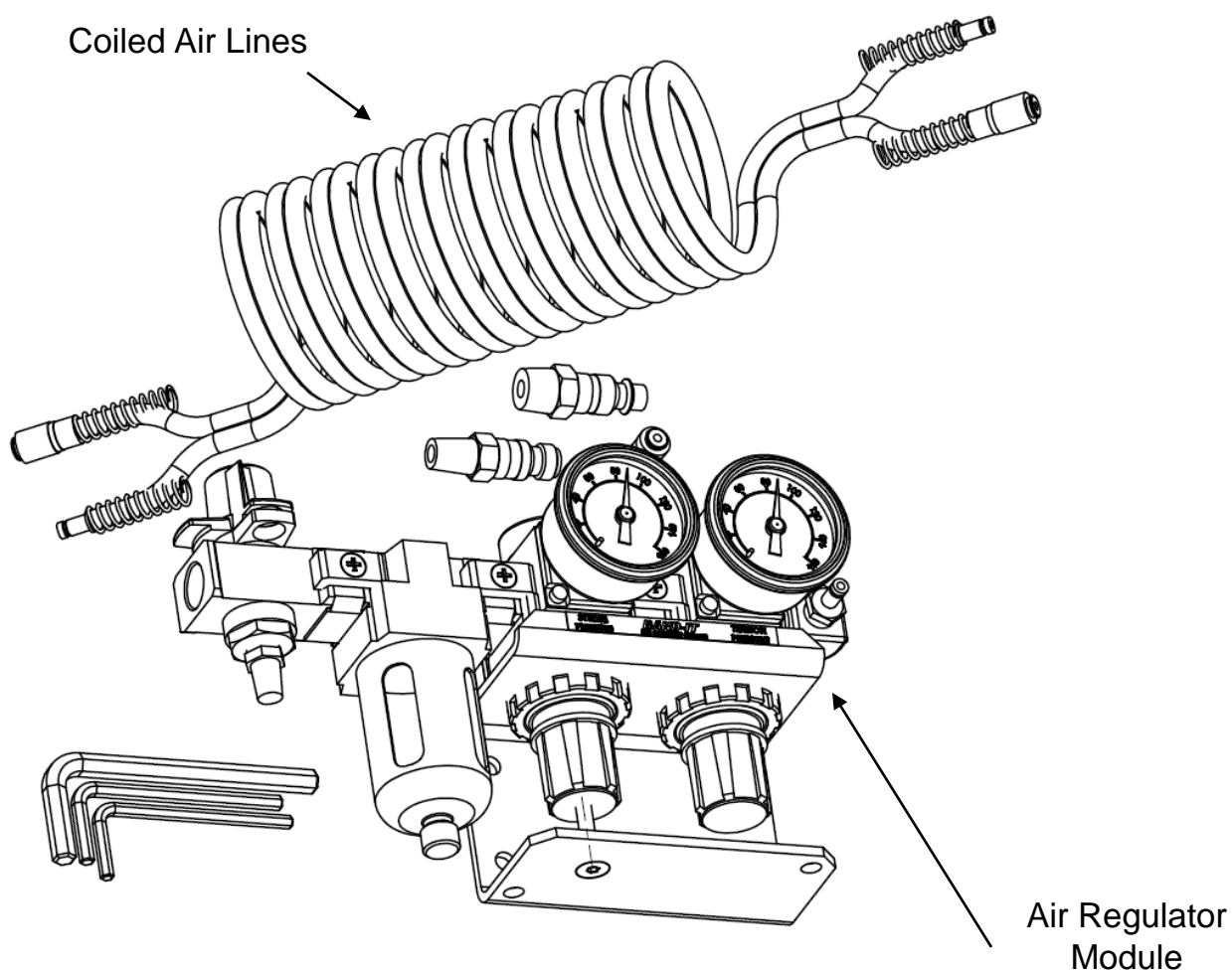
IT1000-C, 1/4" Tie-Lok® Ties

"TL" on Cutter Blade

Knife with Punch and Dimple Clip



Identification of Standard Accessories



Packaging Option 0: Box includes IT tool, owners manual, air controller module, coiled air line, hex keys and fittings

Packaging Option 1: Box includes the IT tool and manual only

Air System Requirements

For proper tool performance, the incoming compressed air requirements to the BAND-IT Air Controller Module of the BAND-IT Pneumatic IT Tool must be:

Item	Min	Max
Inlet Supply Pressure in PSI (kPa)	100 (690)	150 (1,034)
Inlet Supply Air Flow in SCFM (L/min)	1.5 (42.5)	-
Filtered air particle size (microns)	-	(5)
Air Moisture Content	-	20% RH



Warning - Failure to follow the below specifications may cause significant damage to internal tool components.

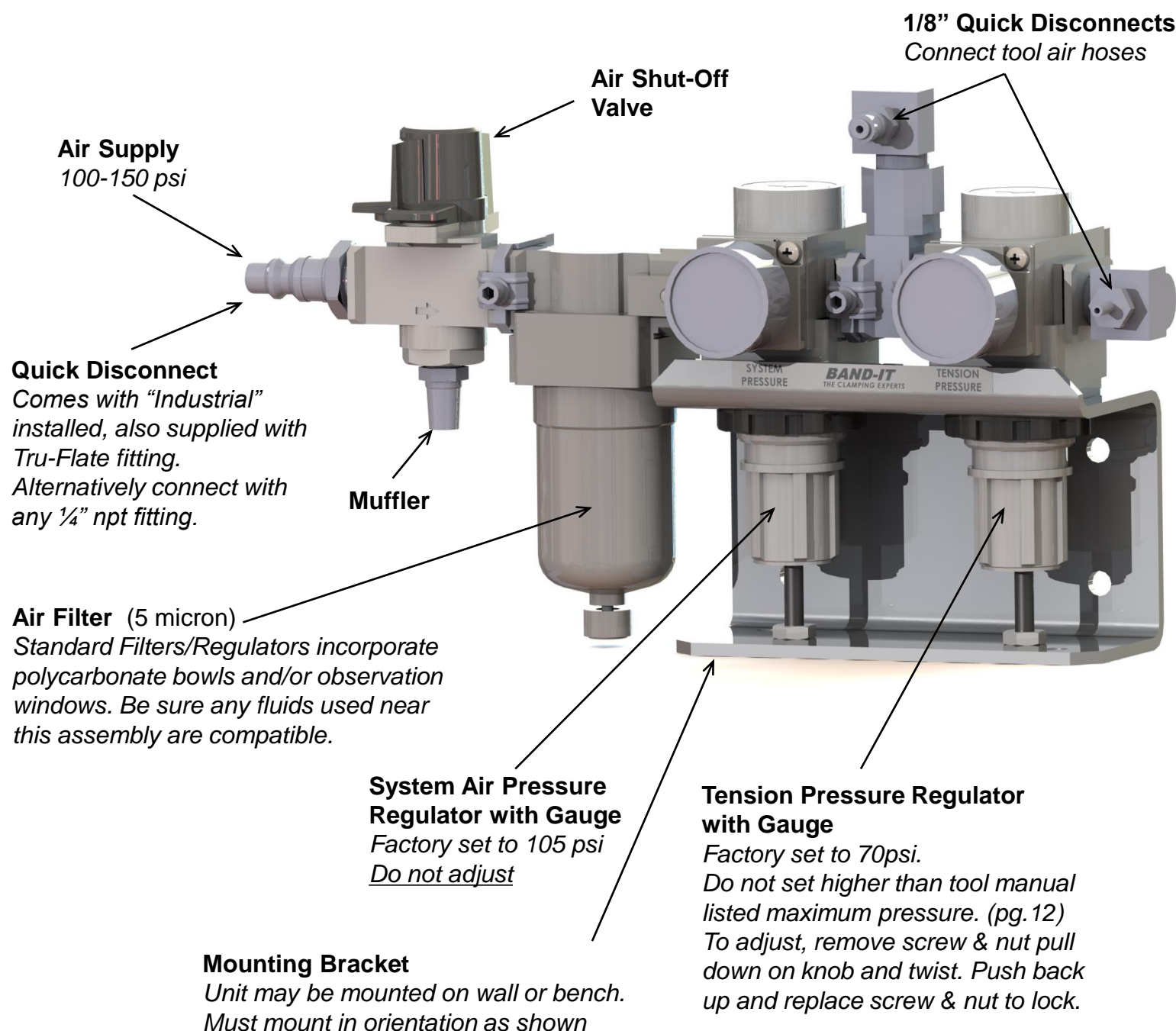
Although cylinders are permanently lubricated, **premature wear can be caused by contaminants in the air supply or the presence of water and oil**. The tool's internal valves can also be affected by contaminants in the air lines causing a valve malfunction. The BAND-IT Air Controller Module includes a filter to meet particle requirements.

BAND-IT recommends the use of an Air Booster System to address the potential problems associated with low air supply, including:

- filters and dries the air supply
- assures pressure of 100 PSI (690 kPa)

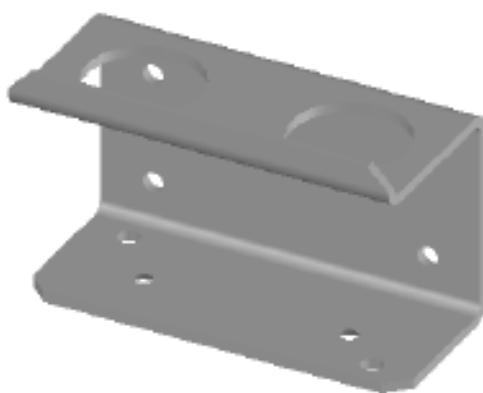
Contact BAND-IT-IDEX Customer Service at 1-800-525-0758 or 303-320-4555 for more information.

Air Control Regulator Assembly (I56099)



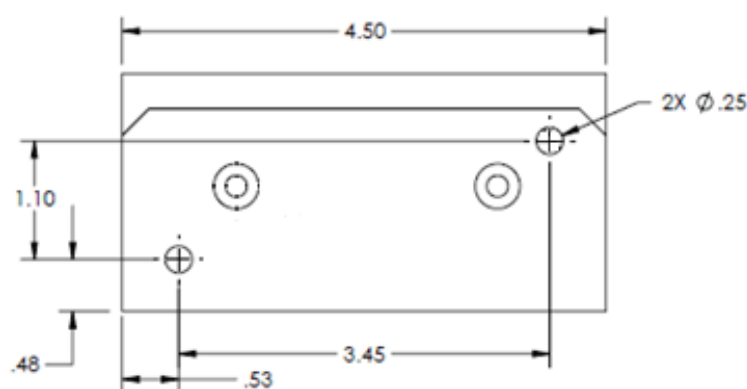
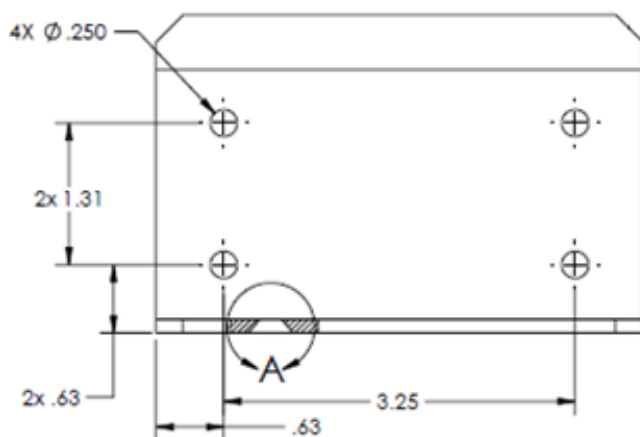
Regulator Mounting Holes

For proper performance the air control module must be mounted and operated in a horizontal position as shown on the previous page. Below is the layout for the mounting hole locations dimensioned in inches.



Hole layout for mounting to a wall

Hole layout for mounting to a bench



Air System Settings

Initial Setup – Pneumatic Settings

Connect the tool body to the Air Controller Module using the included Coiled Hose Assembly. The hose assembly includes both a clear and black hose. Each hose end includes a female and male fitting, arranged to prevent reversing of connections.

Connect Air Controller Module to air source (assure air supply meets requirements on “Air System Requirements” page) and turn RED Shut-off Valve to pressurize tool (supply position).

	IT2000-C / 1/4" JR® Clamps		IT1000-C / 1/4" Tie-Lok® Ties	
	Cut-Off Pressure	Tension Pressure	Cut-Off Pressure	Tension Pressure
Minimum	100 PSI (690 kPa)	60 PSI (415 kPa)	100 PSI (690 kPa)	50 PSI (345 kPa)
Recommended	105 PSI (725 kPa)	90 PSI (620 kPa)	105 PSI (725 kPa)	80 PSI (550 kPa)
Maximum	110 PSI (760 kPa)	100 PSI (690 kPa)	110 PSI (760 kPa)	80 PSI (550 kPa)



Caution: Tension pressures above the specified settings may cause premature clamp failure and/or tool wear. Refer to the “Tool / Component Identification” page to verify the tool model.

Setting the Tool Air Pressure

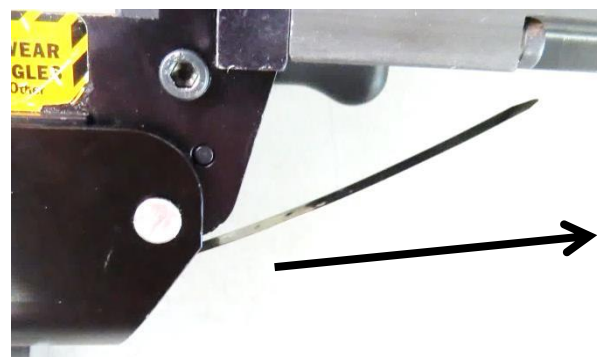
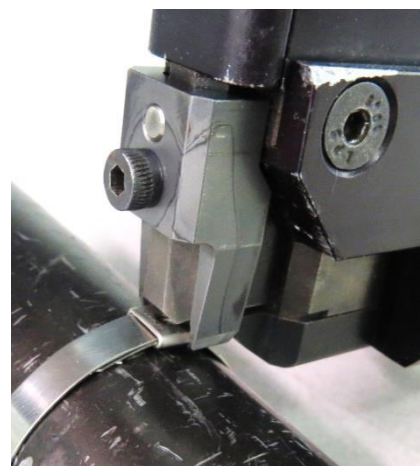
The tension pressure directly affects the force applied to the clamp.

To correctly set the air pressure from the air controller module going to the tool, connect the air supply to the tool. Activate the tool by depressing the trigger for a few seconds. Re-read the pressure when the tool is at rest and adjust again if necessary. Repeat until the desired pressure is shown on the tension pressure gauge.

Tension pressure may need to be adjusted to provide adequate tension for the specific application.

Tie-Lok® Tie / Jr® Clamp Installation Procedure

1. (Tie-Lok Tie only) Lace the tie snug around the assembly and locate the buckle in the target location.
2. Band should be applied to a uniform solid surface allowing the buckle adequate support during the clamp locking and clamp tail cut-off operation. (pg. 16)
3. Insert the tail of the clamp all the way through the tool bringing the tool head as close to the buckle as possible. The tail length extending into tool must be at least 2.5" (6.4 cm) long.
4. Do not activate tool while inserting clamp tail because this can cause tie tail to jam in the Tension Block Assembly.
5. Ensure proper tool orientation. (pg. 14)
6. Begin tensioning by pushing and holding down operating trigger or by using the remote trigger system. If the trigger is released, the tool will cease operation if the desired tension has not been achieved.
7. While tensioning clamp, allow the tool to move freely.(pg.14) Continue to hold down operating trigger until tool completely tensions and cuts off clamp. Release trigger after cut off.
8. After clamp is completed, clamp tail scrap must be removed from tool. Clamp tail scrap is not ejected automatically. Tool is now ready for next tie/clamp.



Note: Trigger activation requires approximately 3 lbs.

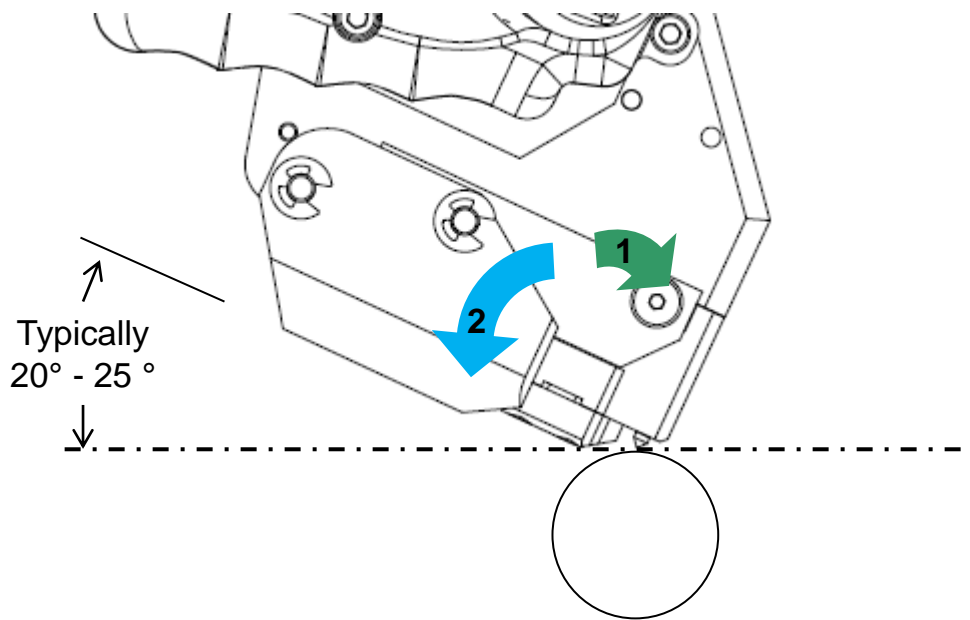
Safety: Keep hands clear of clamp during tensioning to avoid pinch point.

IT Tool Orientation Requirements

The BAND-IT Pneumatic IT Tool must be used correctly in order to reliably install a clamp.

Part of ensuring that the tool is producing a strong lock is making sure that it approaches the application correctly and the fixture configuration allows repeatability of application.

- The tool should approach the assembly in the same orientation that it will finish a clamp installation. Typically around 20° relative to the surface of the work piece.
- The tool head should come close to the buckle and work piece after inserting the clamp tail.
 - Tie-Lok® Ties, have the dimple clip start to engage the buckle.
 - JR® clamps, stage the tool slightly above the clamp.
- The buckle should be located in the final target area on the assembly.
- Once the tool begins tensioning, allow the band to pull the tool down to the surface.
- As the band is tensioning, the tool may rotate clockwise above the buckle as in direction 1 (Green Arrow).
- During cut-off, the tool must be allowed to rotate counter-clockwise up to 35 degrees in direction 2 (Blue Arrow).



Tie / Clamp Inspection

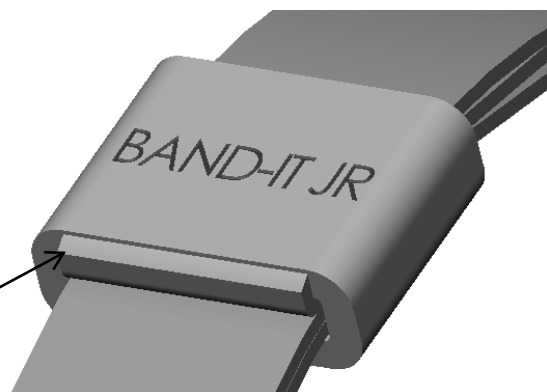
The IT1000-C forms a locking dimple into the Tie-Lok tie with the punch and cuts the remaining tail. When installing a Tie-Lok tie, a visual check is recommended to verify the presence of a locking dimple after the tie has been applied.

Locking Dimple



The IT2000-C forms a locking lip on the preformed JR clamp and cuts the remaining tail. When installing a JR clamp, a visual check is recommended to verify the presence of the locking lip after the clamp has been applied.

Locking Lip



By controlling and monitoring the items that are needed to form a good lock, an operator can help ensure that the clamp will be applied correctly without having to inspect every assembly. The key issues are:

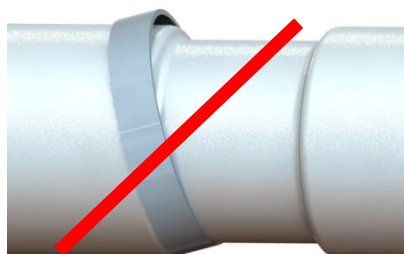
- Adequate air pressure and volume (Pg.9)
- Appropriately setting the tension and cutoff air pressure for the application (Pg.12)
- Angle of approach (Pg.14)
- Operator Handling Ergonomics (Pg.19)
- Mounting the tool on a weight balancer or custom fixture (Pg.21)
- Following the recommended Preventative Maintenance schedule (Pg.27)

Clamp Placement

Buckle location is critical to clamp performance. Use the following guidelines as a reference.



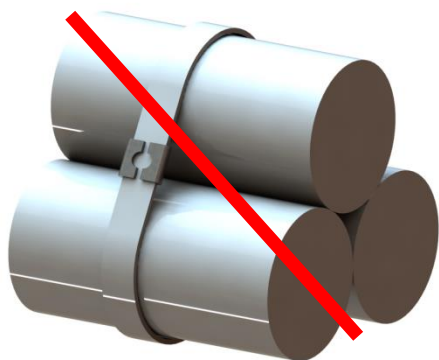
- Band target area must be wider than the band and tool head with some additional clearance for variation side to side.



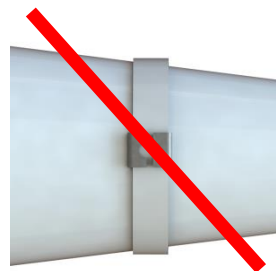
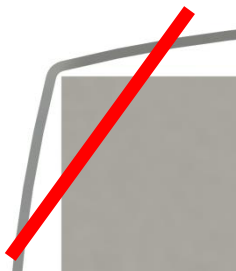
- Do not install clamps at an angle
- Buckle locations cannot be over air gaps

- Do not install clamps around square corners

- Do not install clamps on tapered surfaces or on tube bends



- Tie-Lok & JR Clamp advised min installed diameter is 1"

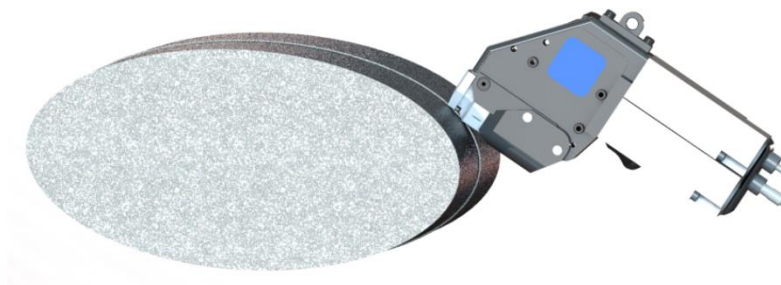


For specific questions contact BAND-IT-IDEX Customer Service at 1-800-525-0758 or 303-320-4555 for more information.

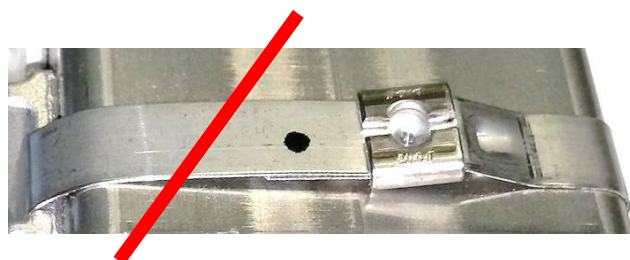
Clamp Placement & Tool Positioning

Buckle location is critical to clamp performance. Use the following guidelines as a reference.

- On large oval shapes locate buckle on smaller radius.



- Avoid installing buckles on flat surfaces.
 - On rectangular shaped parts, locate buckle at corner with tool approaching object.

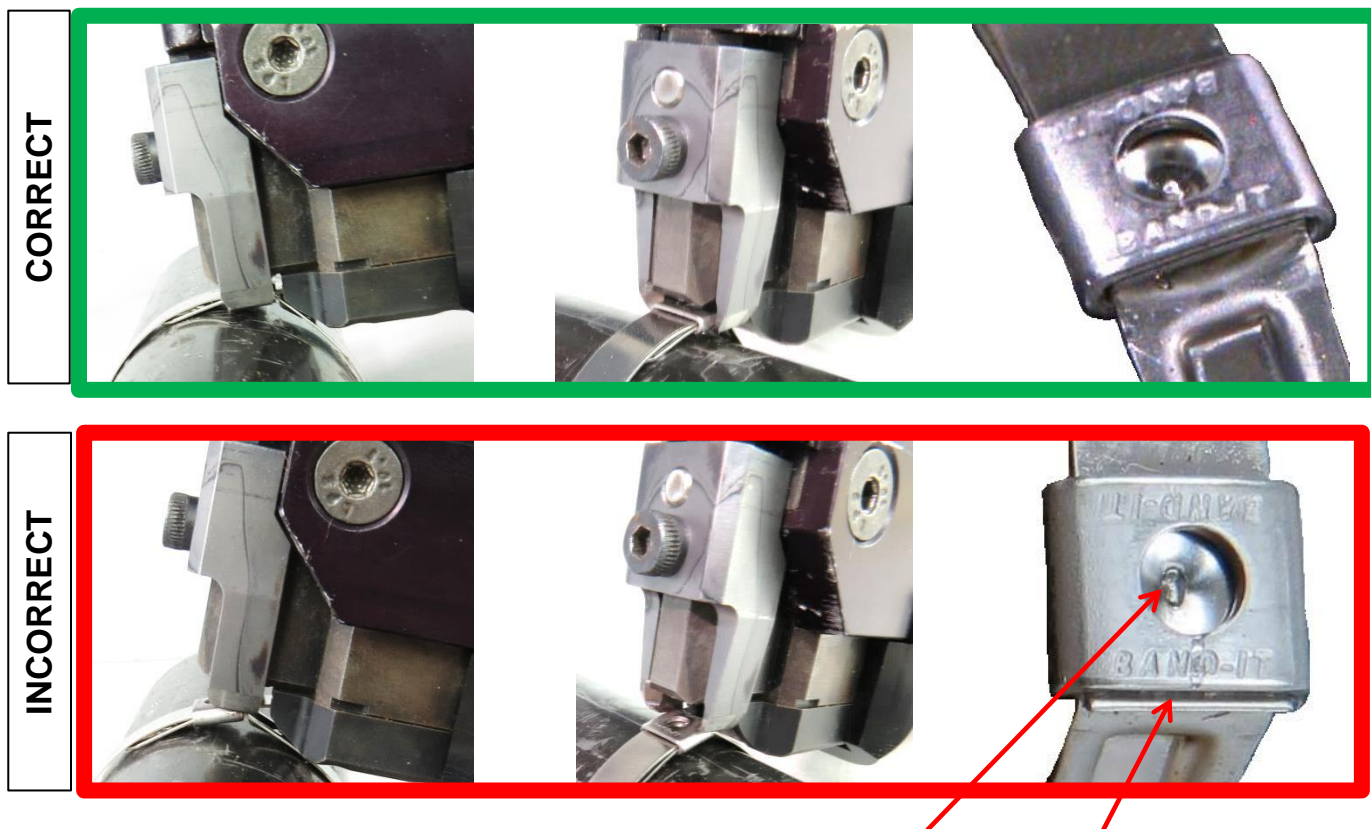


- Do not bring tool up to stop for positioning. A stop will not allow proper tool rotation during tension and cutoff resulting in a loss of clamp performance

For specific questions contact BAND-IT-IDEX Customer Service at 1-800-525-0758 or 303-320-4555 for more information.

Dimple Clip Guide (IT1000 only)

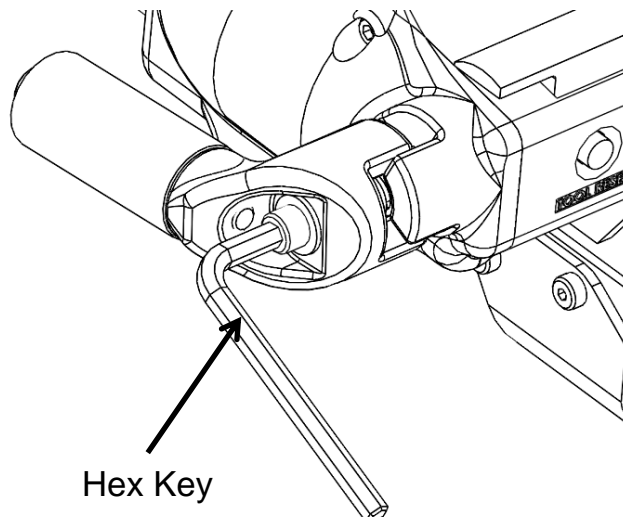
- The dimple clip provides a full depth punch during a the cutoff cycle. The dimple clip also helps to reduce the occurrence of undetectable loose ties. The presence of the punch provides a positive visual indicator to identify good vs. bad tie installation.
- Tool orientation is critical to proper function. The tool must be aligned so the clip is contacting the work piece while the clamp is being tensioned in order to make sure the buckle locates inside clip during assembly.
- If the buckle slides under the clip, the dimple lock may not form and the tie may be loose.



Incorrect alignment results in shallow dimple & excess tail

Adjustable Handle for Hand Use

- Using a hex key (supplied), adjust the handle to ergonomically match the operators hand.
- Be sure not to adjust the handle too far outward (beyond interlocking legs) or the handle will not function properly or provide support to the operator.



Tool Ergonomics

- Tool weight – 5 Pounds (2.3 Kg)
- A Neutral wrist position is recommended
- A bent wrist can cause operator fatigue, and tool misuse
- Any fixture design should attempt to replicate the natural human wrist / elbow / shoulder motions that would occur when operating the tool in the hand-held configuration, allowing the tool to float along a plane through the entire Tension (pull-up) and Cut-Off (lock) process.



IT Tool Clearance Requirements

There are three common considerations for tool clearance

1. Channel Flat width (D)
 - Must be wider than the blade (A) 0.76" [19.3mm]
2. Raised width (E)
 - Must be wider than flip cover (B) 1.38" [35.1mm] when between 0.23" - 1.5" [5.8 - 38.1mm] tall
 - Must be wider than the pins (C) when taller than 1.5" [38.1mm]
3. Shoulder height (F) depends on tool orientation
 - When under the handle, must be less than 2"
 - When away from handle, width must increase to give clearance to air cylinders, but no height limitation.



A. Blade width

- 0.76" [19.3mm]

B. Flip cover width

- 1.38" [35.1mm]

C. Pin

D. Flat width

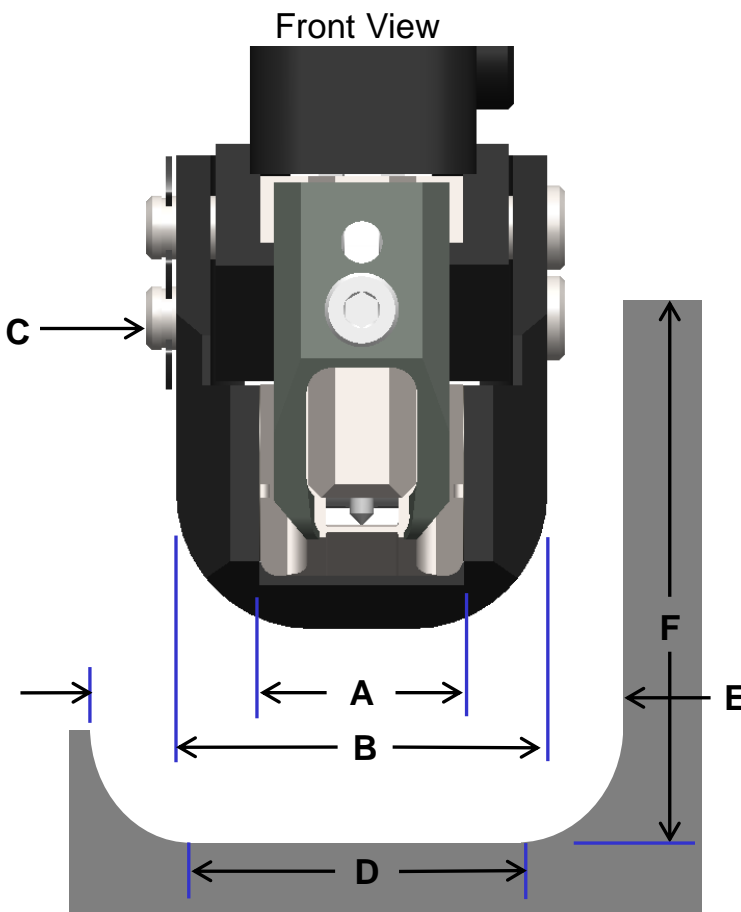
- > 0.76" [19.3mm]

E. Channel width

- > 1.38" [35.1mm]

F. Shoulder height

- < 2" [50.8mm]

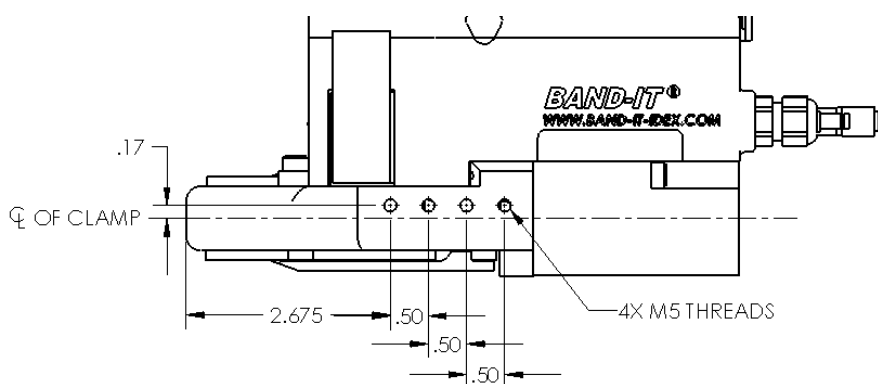
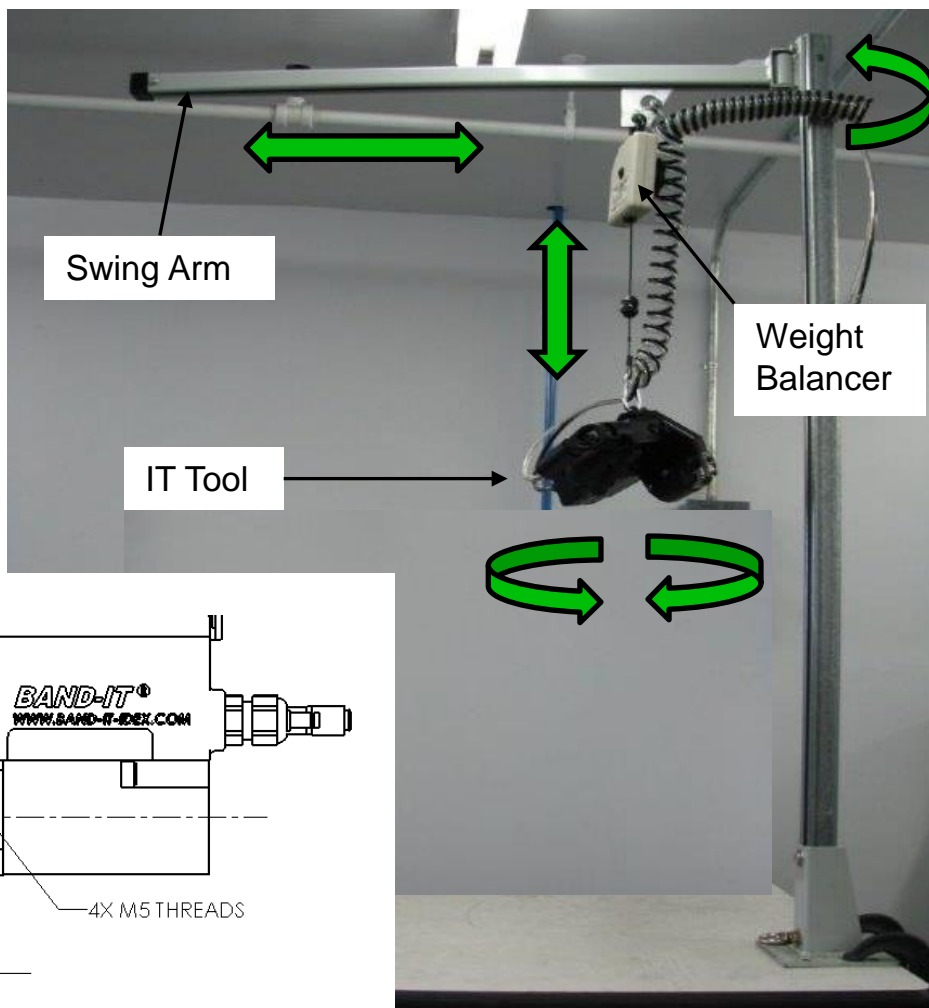


Fixture Hanger

At a minimum BAND-IT recommends that the tool be connected to a weight balancer or be mounted in a fixture that will provide adequate rotation during operation.

- **Support boom & Balancer**

- 4 axis of movement to locate tool directly over target clamp location.
- The balancer must support a tool weight of approximately 5 lb.



The tool comes with a hanger loop installed on the top face to mount to a weight balancer. When removed, there are four M5 threads that can be used to secure the tool to a fixture. The included tool hanger may be attached to any of the mounting holes as shown below.

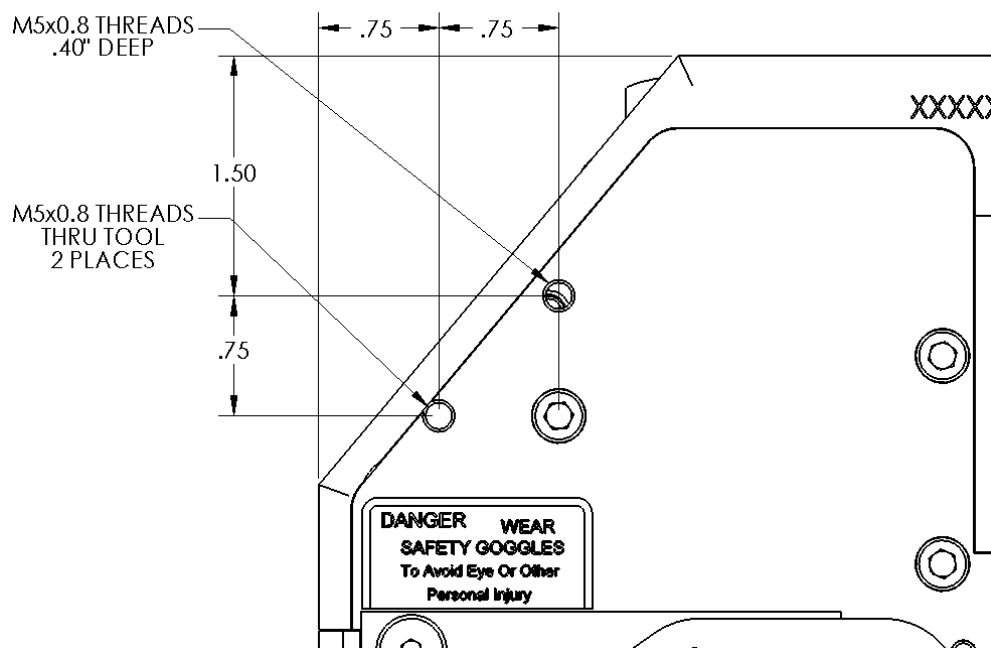


Caution: do not allow screws to extend deeper than 7/16" (0.438") into the tool body. Longer screws will interfere with the internal components of the tool and cause tool to jam.

Fixture Mounting Holes

Three additional fixture mounting holes are available to assist with mounting the tool. Thread size is M5 for all holes.

One hole is utilized to attach and lock the tool body cover to the tool body. This hole may also be used for a fixture, provided the M5 cap screw is replaced with a similar screw with appropriate thread length.

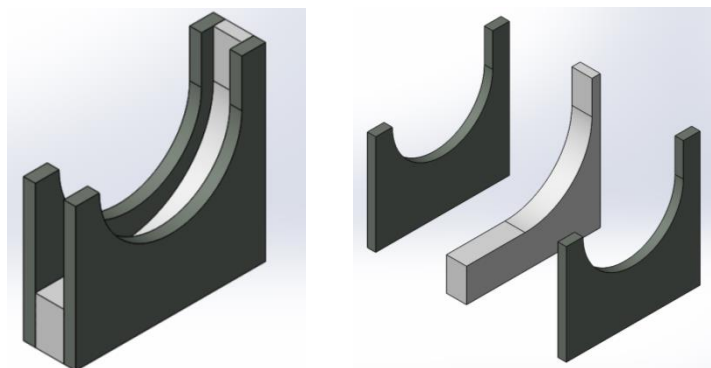


Fixture guide for Tie-Lok® Ties

The center block should allow for the buckle to pass around the work piece. This will allow the tie to be threaded from either end.

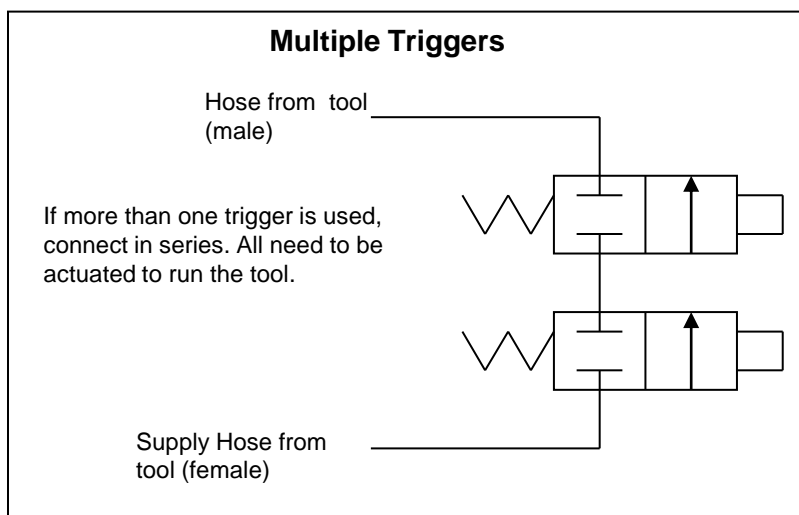
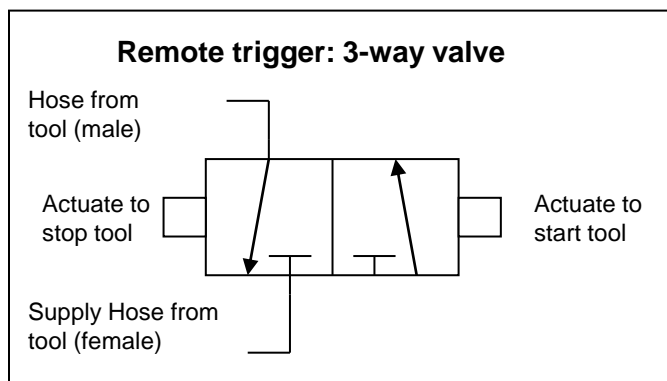
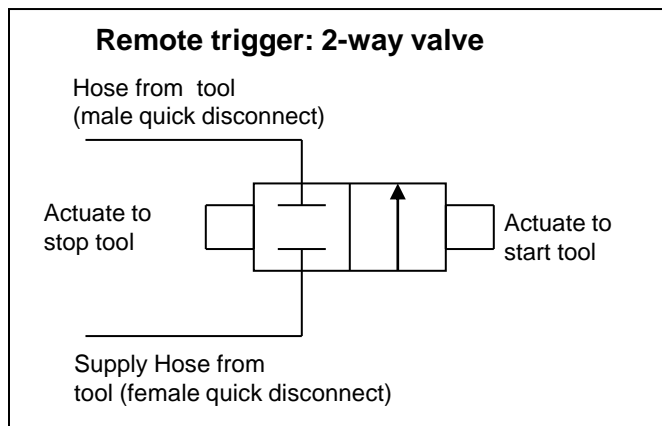
The center block should not induce a tight curve set in the band. A tight set in the band will make lacing the band through the buckle more difficult.

Clamp guide material should be heat treated tool steel



Remote Actuation Configuration

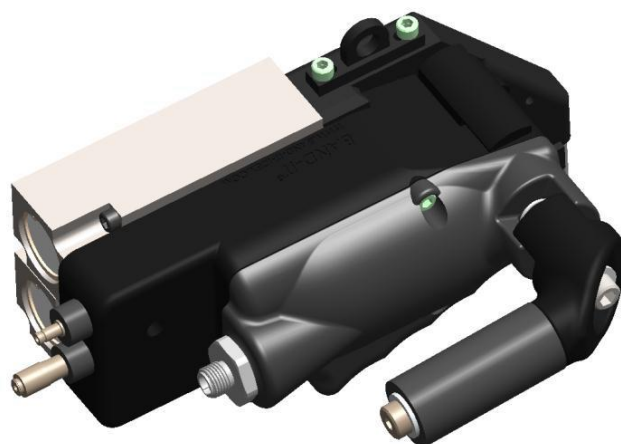
- A tool with trigger option 0 is manually operated via the thumb button. A tool with trigger option 1 is configured to allow remote operation via palm button or other device permitting the tool to be incorporated into the customer's fixture or assembly process.
- The modification consists of deactivating the thumb lever actuation switch and installing two 6-ft X 1/8" O.D. hoses with quick disconnects. These lines can be connected to any valve used as a remote actuation device. Examples include palm buttons, foot control pedals, and others.
- Various actuation devices can be incorporated based upon end user requirements. Basic schematic for 2-way & 3-way valves included below. The valve should be set up in the normally closed mode and upon opening the circuit a supply of air is provided.
- The customer is responsible for incorporating this tool into their process. BAND-IT-IDEX is available to provide advice and recommendations.



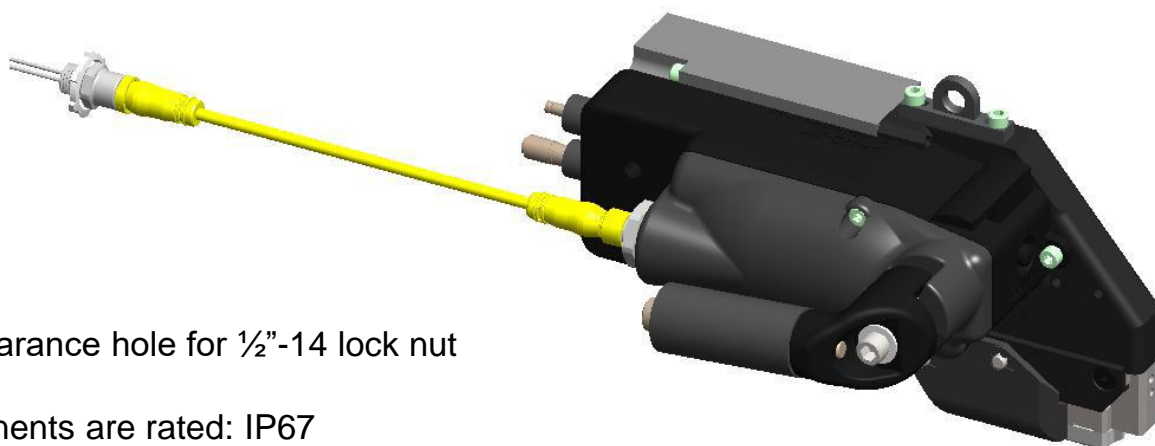
Cutoff Signal Option

The cut-off signal option provides a signal from the tool that indicates the completion of a clamp installation. Pressurization of the cut-off cylinder activates a pressure switch when the tool switches from the tension cycle to the cut-off cycle. The pressure switch is “normally open” and closes to complete a circuit when cut-off cylinder pressure exceeds 45 ± 15 psi during cutoff cycle. The signal can be transmitted to a data collection device, such as a PLC, via the 12-foot extension cable and used as a counter to track the number of clamps applied by the tool. The switch has a maximum voltage rating of 42V.

The -002 and -012 configurations are tool systems that also come with a 12-foot extension cable (I60387), female receptacle (I60487) and electric panel lock nut (I61187) for mounting to a PLC or other control box. The polarity of the 2 wire leads from the receptacle is not critical.



An IT Tool with configurations -102 and -112 contain the pressure switch and 2 pole Micro AC series male receptacle.



Mounting Hole:
 $\frac{1}{2}$ "-14 NPT
Or
.85" diameter clearance hole for $\frac{1}{2}$ "-14 lock nut

Electrical components are rated: IP67

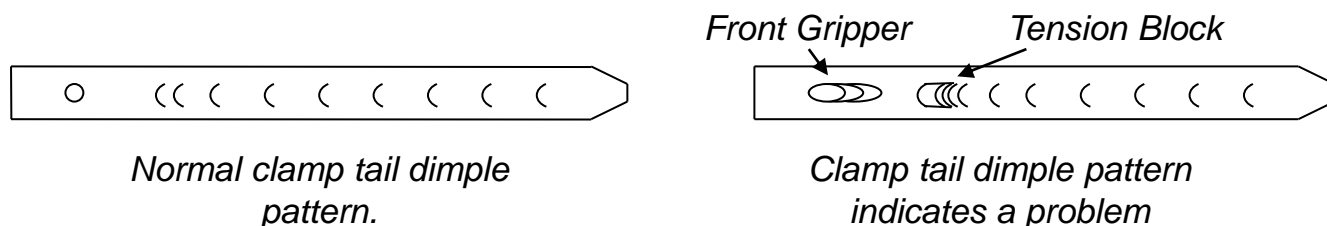
Contact BAND-IT IDEX Customer Service at 1-800-525-0758 or 303-320-4555 for any questions not addressed above.

Trouble Shooting Guide: Unable to Achieve Tension

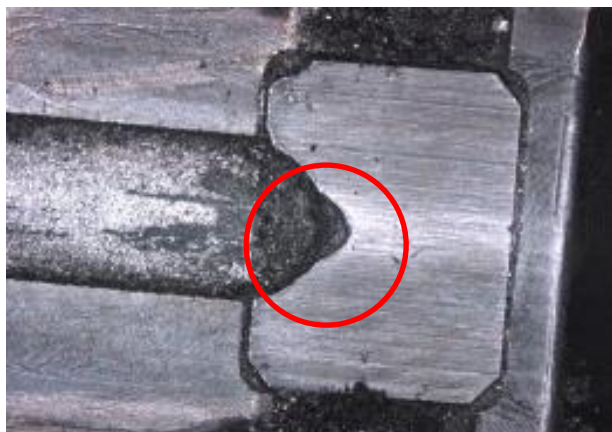
If the tool fails to fully tension the clamp:

Failure to fully tension the clamp can be caused by a variety of factors. The two most common factors are incorrect tension pressure and problems with the grippers.

- Check tension pressure setting on Tension Pressure Gauge of Air Controller Module. Adjust pressure per the settings found in the “Air System Settings” page.
- Evaluate the clamp tail dimple pattern. If elongated dimples are present, the problem may be with the Tension Block or Front Gripper.



- If a problem is indicated, follow the instructions in the “Maintenance” section to remove and inspect the tension block assembly and the front gripper.
- Examine the Tension Block and Tension Gripper for damage or wear.
- Examine the Front Gripper area for foreign debris and/ or buildup of metal shavings.
- Ensure that the four cutter blade screws are tightened.
- If excessive damage or wear is determined, replace the worn parts.



A worn out tension block:
Edge is no longer sharp, or is chipped



A worn out tension gripper:
Ridges are worn off in some sections

Trouble Shooting Guide: Tool Symptoms

Symptom	Items to check	Suggested fix
Difficulty inserting clamp tail into tool.	Is there a clamp tail already in the tool?	Remove previous clamp tail.
	Do the gauges on the control module show pressure?	Check incoming supply pressure. Turn the air regulator valve ON.
Tool does not cycle when the trigger is pressed.	Do the gauges on the control module show pressure?	Check incoming supply pressure. Turn the air regulator valve ON. Check for pinched air lines under the handle cover.
Tool tightens clamp, but cutoff does not activate.	After the tool stalls, does nothing further happen? (no sound of the cylinder moving)	Check for pinched air lines. Check cutoff timing.
	Does the cylinder sound as though it moves, but the knife does not extend?	Remove the side body and verify all links are present and connected. Verify there is a knife installed.
Tool attempts to cutoff and lock the clamp before it is tight.	Is the cutoff timing too short?	Adjust cutoff timing.
	Is the tool struggling to pull up the clamp?	Increase tension pressure. Lubricate the tool.
Tool fails to cut or lock clamp. (Press reset button to release tool from clamp if stalled)	Check tension and cutoff pressures.	Adjust pressure regulators if not set at specification. Verify that the hose from the tension regulator enters the bottom port of the tool.
	Check knife and blade for excessive wear or chips on the cutting edges.	Replace as necessary.
Clamp is loose after cutoff.	For TLT/ IT1000, Check dimple punch & tool orientation allowing buckle to enter dimple clip. For JR/ IT2000, check that proper blade is installed .	Replace damaged or incorrect parts; assemble with buckle entering dimple clip. Do not allow fixture interference with tool motion.

Contact BAND-IT-IDEX Customer Service at 1-800-525-0758 or 303-320-4555 for repair on any issues not addressed above.

Preventative Maintenance

The tool has components that must be checked and/or replaced on a regular schedule. If tools are experiencing difficulties during function or there are audible air leaks coming from inside the handle, the tool should be returned to BAND-IT for service. Pneumatic components must be serviced by BAND-IT in order to assure proper tool performance after a repair.

Clamps Installed	Maintenance Item	Maintenance Action
Every 25,000	Maintenance Cover (pg. 29)	Clean & Re-Lubricate
	Tension Block and Gripper (pg. 30)	Inspect, Clean, Re-Lubricate
	Front Gripper (pg. 31)	Clean & Re-Lubricate
	Cutter Blade & Blade Screws (pg. 31)	Inspect & Replace if necessary
Every 50,000	Tool Cavity, Tool Head, Linkages (pg. 34)	Clean & Re-Lubricate
	Knife and Dimple Punch (pg. 33)	Inspect & Replace if necessary
Every 100,000	Head Pin and Front Cutoff Lever (pg. 32)	Inspect & Replace if necessary

Some applications and environments may require maintenance intervals to be adjusted. Consult BAND-IT-IDEX for more information.

For best performance and to extend tool life:

- Follow preventative maintenance and parts replacement instructions at appropriate service intervals.
- Do not remove factory applied lubrication from inside tool unless performing a thorough maintenance procedure and then replacing with fresh lubricant immediately.
- Do not use degreaser in the tool body.
- Do not spray any lubricant or cleaner into the Quick Connect Air Couplings.
- Use nominal recommended tension setting (see "Air System Settings" page). Tension pressures above the specified settings may cause premature clamp failure and/or tool wear.
- For maintenance beyond what is described in this manual, consult BAND-IT-IDEX Customer Service at 1-800-525-0758 or 303-320-4555.

Maintenance: Replacement Parts

Production tools will experience wear of specific parts. High cycle tools may experience a component failure that is not considered a wear part. Preventative maintenance, including regular cleaning and lubrication will reduce the replacement frequency of these parts. Threaded fasteners may be replaced by off the shelf parts, but they must be an identical replacement or tool function may be affected.

Part #	Description
I51029	IT1000-C Cutter Blade Kit (pg. 31)
I51039	IT2000-C Cutter Blade Kit (pg. 31)
I51081	IT1000-C Knife (pg. 33)
I51086	IT2000-C Knife (pg. 33)
I51066	Tension Block Assembly: includes tension block, tension gripper, tension pin, and 2 springs (pg. 30)
I40087	Hanger bracket; for attaching tool balancer (pg. 7 & 21)
I51064	Front gripper ball (pg.31)
M24190	Front cutoff lever (pg.32)
I14387	Head pin (pg.32)
	Socket head cap screws M5 x 10mm; for balancer bracket & cover plate
	Lubricant: Chevron Rykotac Grease EP or Black Pearl EP (or equivalent)
	Several fasteners require Loctite, Blue - Medium strength.

Please have both the tool model and serial numbers available when calling the factory for service or assistance. Contact BAND-IT-IDEX Customer Service at 1-800-525-0758 or 303-320-4555 for more information. Part numbers are subject to change.

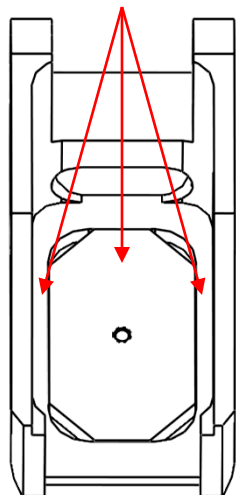
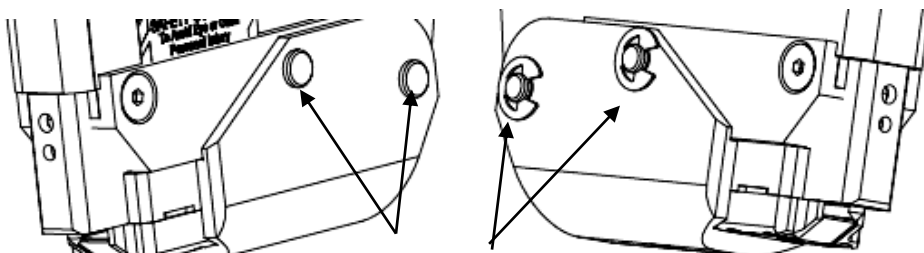
Maintenance: Maintenance Cover



Important: Before disassembling tool, be sure to shut-off air supply on the Control Module.

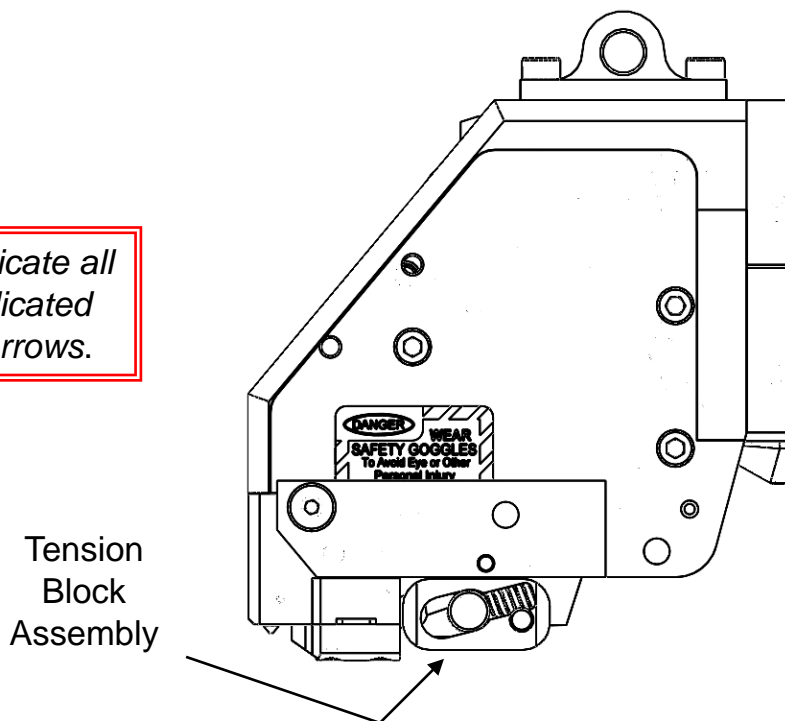
Note: This tool uses metric fasteners.

- 1) Remove the two e-style retaining rings and two clevis pins. Remove the maintenance cover.
- 2) Remove the tension block assembly by lifting it out of tension arm slot. Tension block may come out with maintenance cover.
- 3) Fully clean and lubricate inside of maintenance cover as shown.



Lightly lubricate all points indicated with red arrows.

Maintenance Cover



Continued on next page

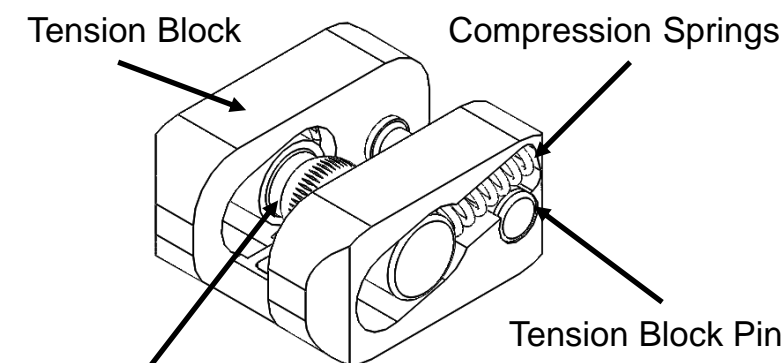
Maintenance: Tension Block Inspection & Replacement

Disassembly & Inspection:

- 1) Remove the two Compression Springs.
- 2) Remove Tension Gripper and Tension Block pin from the Tension Block.
- 3) Tension Gripper — Look for worn spots or other damage.
- 4) Tension Block — Look for damaged edge on insert or other damage. See the “Trouble Shooting Guide: Unable to Achieve Tension” page 24 for details.

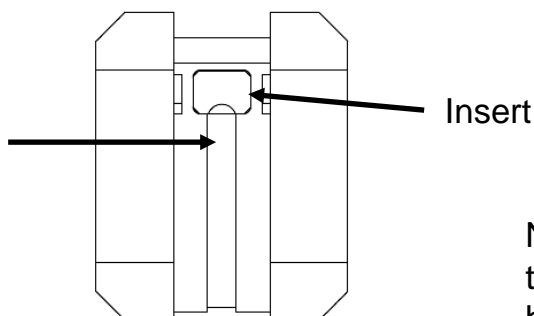
Reassembly:

- 1) Thoroughly clean out any accumulated debris from inside the Tension Block
- 2) Lubricate the surfaces shown with red arrows
- 3) Install the Tension Gripper and Tension Block Pin in the Tension Block.
- 4) Reinstall the Compression Springs

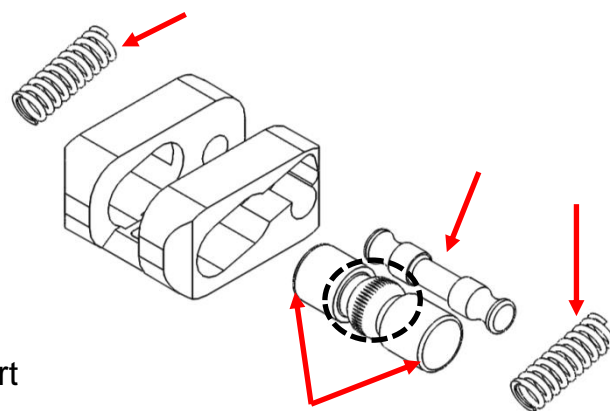


Tension Gripper

Clean out any
accumulated debris
from the slot in the
Tension Block



*Lightly lubricate all outside surfaces
of tension block and surfaces
indicated with red arrows.*

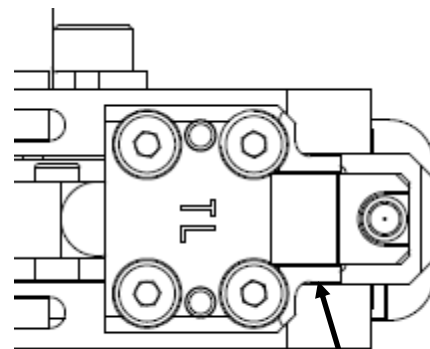


Note: Ensure no lubrication is present in
the center of Tension Gripper (indicated
by the circled area)

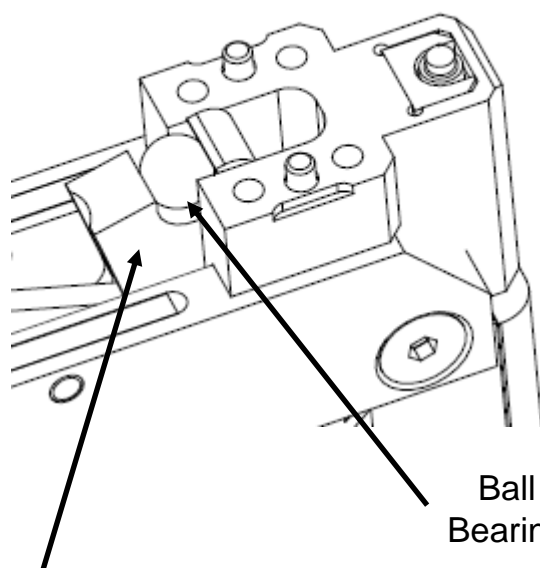
Maintenance: Cutter Blade Inspection & Replacement

Removal & Installation:

- 1) Remove the four M3x8 screws with a 2.5mm hex key. This can occur with the tool fully assembled.
- 2) Pull the cutter blade off of the two alignment pins in the tool head.
- 3) Inspect cutter blade for chips and excessive wear on cutting edge. Replace if blade is causing unacceptable clamp cut-off. Clean any shavings or debris that have built up on cutter blade.
- 4) Remove all accumulated shavings and debris from inside the front gripper where the ball bearing is inserted. The part can be pulled back and out of the tool head slot.
- 5) Lubricate ball bearing after cleaning.
- 6) To re-install cutter blade, use alignment pins and install the four M3x8 screws with blue Loctite.



Cutter Blade

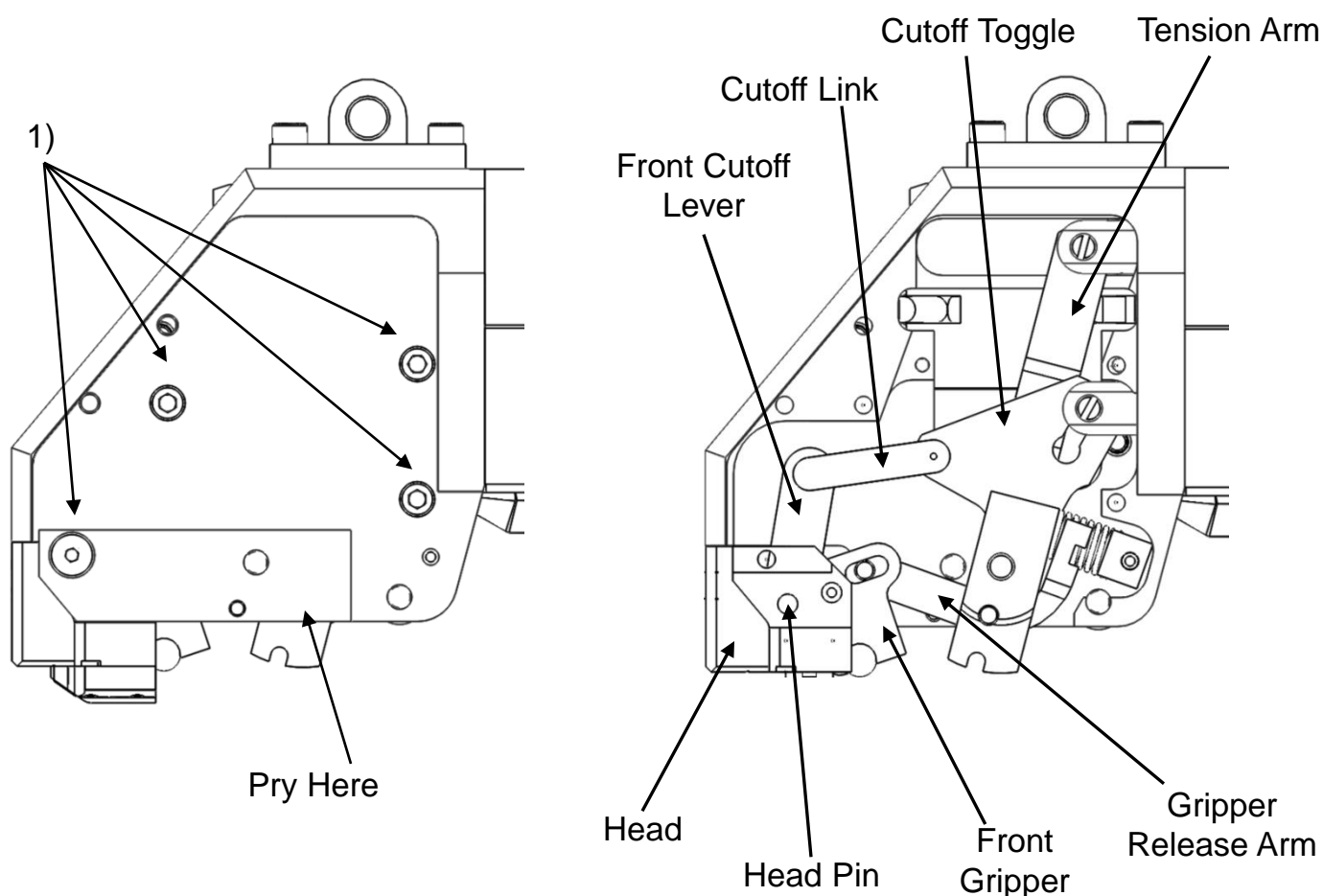


Front Gripper

Ball
Bearing

Maintenance: Tool Body and Linkages

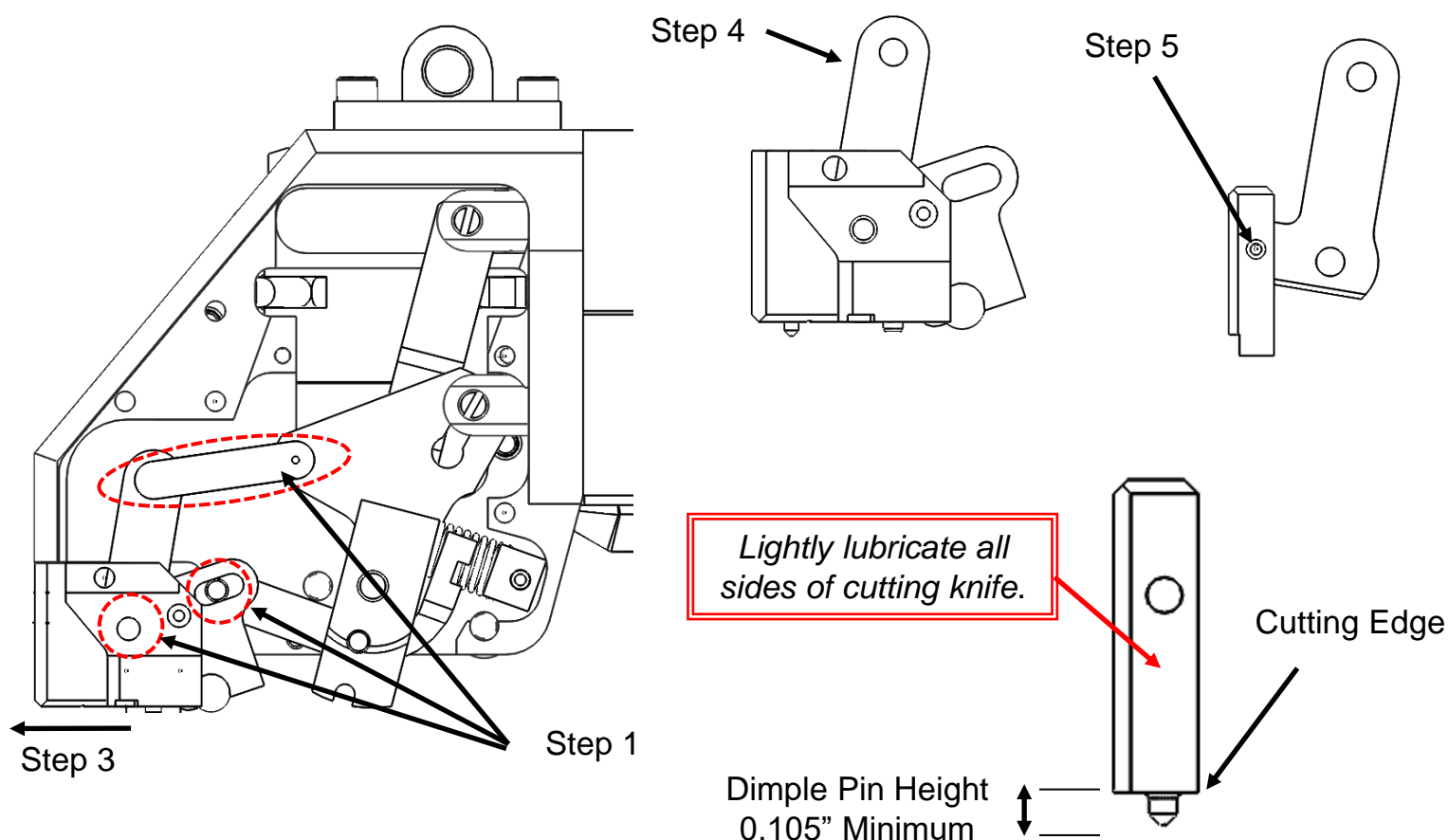
- 1) Remove the three cap screws (4mm hex) and the one flat head screw (3mm hex) as shown.
- 2) Remove the side cover after screws are removed. The side cover is a close fit and may require a screwdriver to pry off near the tension arm.
- 3) Examine the mechanical linkages for over-all condition such as dirt, metal filings, liquid contamination and lubrication.



Maintenance: Knife Inspection & Replacement

- 1) Remove the one cutoff link and two pins shown
- 2) Remove the tool head by removing one flat head screw (3mm hex) on opposite side
- 3) Remove tool head assembly by sliding it along keyway in tool body
- 4) Lift cutter arm and knife assembly out of tool head
- 5) Push the pin out of knife assembly to remove the cutter arm
- 6) Inspect cutting edge for chips and excessive wear. Make sure knife is well lubricated.
- 7) For IT1000-C only: the Dimple Pin height should be 0.105" minimum. Inspect dimple pin for excessive wear.

Note: Be careful not to let ball bearing fall out of gripper guide. Further cleaning of the gripper guide and ball bearing can occur here if necessary.



Maintenance: Lubrication



Important: Before disassembling tool, be sure to shut-off air supply on the Control Module.

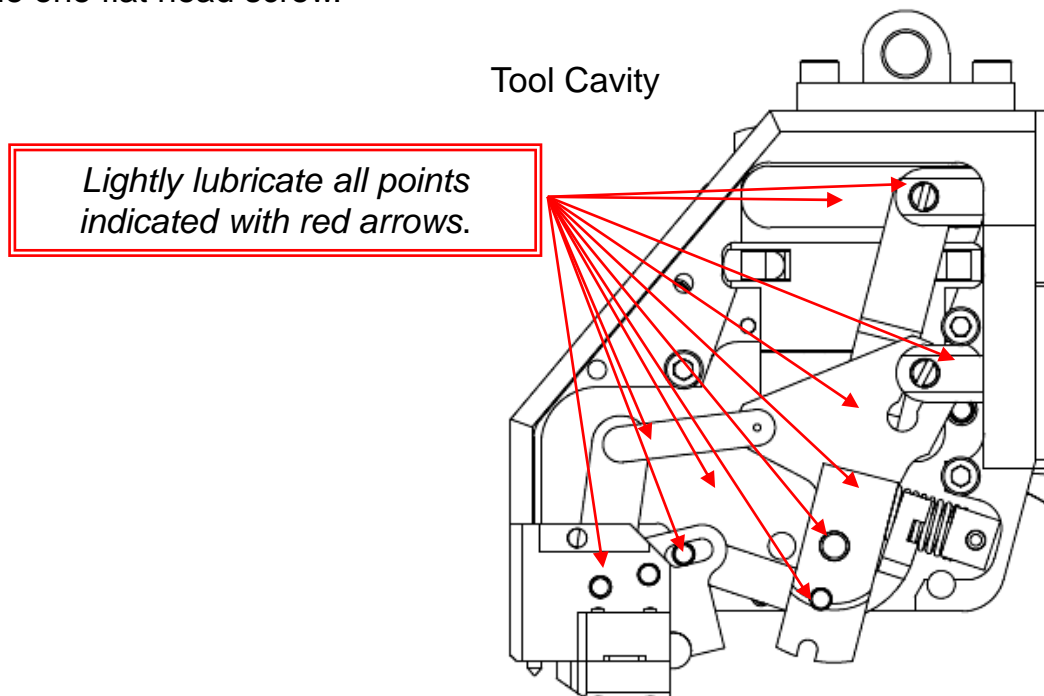
Note: This tool uses metric fasteners.

The recommended lubricant is Chevron Rykotac Grease EP or Black Pearl EP

- 1) Lubricate tool cavity as shown with red arrows below. Also, lubricate the inside surfaces of the maintenance cover (shown below).
- 2) BAND-IT recommends lubrication every 25,000 clamps. Dirty environments may require more frequent intervals.
- 3) Inspect all mechanical linkages for lubrication and proper placement. Refit cover.
- 4) Secure the tool side cover by inserting and tightening the **3 cap screws to 20-30 in-lbs and flat head screw to 10-20 in-lbs** removed on the previous page's steps.

Warning: overtightening flat head screw may cause tool side covers to crack.

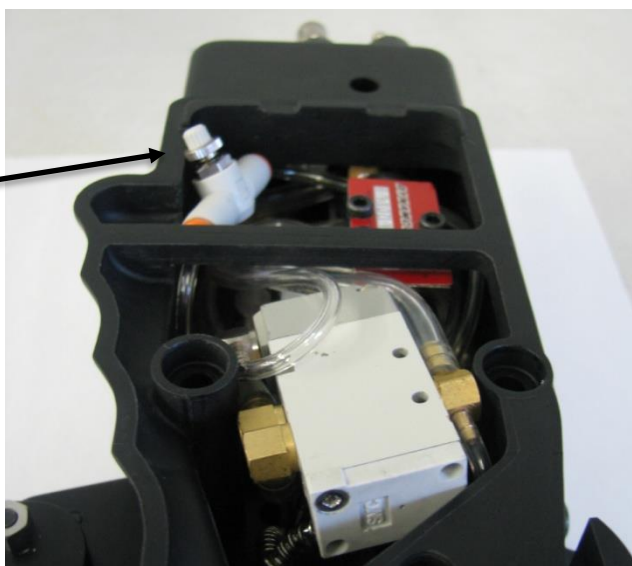
- 5) Apply medium strength blue Loctite to the 3 cap screws and high strength red Loctite to the one flat head screw.



Maintenance: Cutoff Timing Adjustment

- 1) Remove the two cap screws in the Handle Cover with a 4mm hex key. Remove cover and lay aside during their removal.
- 2) The valve used to adjust timing is highlighted in the picture below.
- 3) To adjust: Loosen jam nut, and turn adjustment screw clockwise to increase the cutoff delay and counter-clockwise to decrease the cutoff delay. Once the delay is set, tighten the jam nut against the adjustment screw.
- 4) To test and verify proper adjustment: Connect the tool to the Air Control Module, then turn supply valve on. Gently kink the coiled air supply tube connected to the bottom Quick Connect Air Coupling, then activate the Tool Trigger. This action causes the tool to cut off, allowing the timing to be reviewed. Adjusting the Timing Screw in by ½ turn will slow the tool's cut-off action. Adjusting the Timing Screw out by a half turn increases the speed of the cut-off activation. Repeat this entire step until timing is set at a 0.5 – 1.0 second delay.
Caution: Setting timing to less than 0.5s may result in loose clamps.

Cutoff Timing
Valve



Notes:

- Cut-off timing set too short will not allow the clamp to achieve the desired tension before switching to the cut-off function causing a loose clamp. Clamping on softer objects requires a longer timing.
- Cut-off timing set too long may slow production and cause operator to twist the tool during application. This may damage tool and/or clamp.

Quality assurance testing equipment

- BAND-IT offers a calibration device M38090
 - Manual # M28050
 - Use to verify tool tension output.



Warranty

- Individual tool warranty terms and conditions are included with the tool quote. Refer to quote documentation for specific details.
- Tool sales may include up to 12 month limited warranty. Limited meaning that wear parts are not included, such as blades and grippers.
- BAND-IT must be given the opportunity to physically examine all warranty claims.
- Tools found with severe abuse or unapproved modifications may void warranty upon BAND-IT's discretion.

Additional warranty information, up-to-date literature, and all tool instructions, are available online at: <http://www.BAND-IT-IDEX.com/>
Or call Customer Service at 1-800-525-0758 or 303-320-4555